

To: The Electron-Ion Collider Users' Group members
From: The EICUG Steering Committee
Date: September 20, 2019
Subject: EIC Physics and Detector Conceptual Development

As discussed at the annual meeting in Paris in July, we are in the process of organizing a 12-18 months intensive study of the EIC physics and detector concepts by the members of the EIC users' group. This study seeks to build on the 2014 EIC White Paper and the EIC Detector Requirements and R&D Handbook and will be complementary to the ongoing effort at laboratories and universities worldwide. The study is open to all EICUG members, and we would particularly encourage participation by colleagues from universities.

We are proposing that two groups to be formed: one to quantify physics measurements for existing or new physics topics focusing on implication for detector requirements, and a second to study detector concepts based on these requirements. Each of these groups will further be divided into a number of subgroups. Each subgroup will work on their topic in a collaborative effort over about a year and write a summary of about 15 pages in length. These studies should use, in so far as possible, the current accelerator and detector concepts and simulations should be carried out using the EICUG developed software tools. The summaries from each subgroup would be collected, edited, and published in one volume for each group, in the style of the CERN Yellow Reports.

We envision a 2-day kick-off meeting in late 2019 or early 2020, regular workshops about every 4 months and a meeting in spring 2021 to finalize the reports. We are in the process of putting in place an organizational structure that will be presented at the upcoming meetings of the Institutional Board and User Group.

As you are aware, the Department of Energy is moving forward on the official launch of the EIC project, and serious consideration of site selection has begun. It is possible that the EICUG study of physics and detectors over the next 12-18 months may evolve into proto-collaboration formation. We are prepared to shepherd this transition in the most effective way, if required.

All suggestions and advice are welcome.

Sincerely,

EICUG Steering Committee